

We claim:

1. An isolated variant hepatitis B surface antigen
comprising an amino acid sequence wherein mutations
5 from hepatitis B wild type ayw2 strain appear as
follows: at position 103 isoleucine is present instead
of methionine, at position 118 lysine is present
instead of threonine, at position 120 glutamine is
present instead of proline, at position 170 serine is
10 present instead of leucine, and at position 213 serine
is present instead of leucine.
2. An expression vector for expression of a variant
hepatitis B surface antigen in a recombinant host,
wherein said vector contains a recombinant gene
15 encoding the variant hepatitis B surface antigen of
claim 1.
3. A monoclonal antibody raised against the variant
hepatitis B surface antigen of claim 1.
4. A hybridoma cell line which secretes the monoclonal
20 antibody of claim 3.
5. An assay kit for determining the presence of hepatitis
B in a test sample, comprising: a container containing
at least one monoclonal antibody which specifically
binds to hepatitis B surface antigen wherein the
25 monoclonal antibody is a monoclonal antibody secreted
by the hybridoma cell line claimed in claim 4.
6. A method for determining the presence of hepatitis B
in a test sample, comprising:

- a. contacting a test sample with at least one monoclonal antibody claimed in claim 3 attached to a solid phase, to form a mixture,
- b. incubating the mixture for a time and under conditions sufficient to form antigen-antibody complexes,
- c. contacting the complexes with an antibody conjugated to a signal generating reagent that is specific for the complexes, and
- d. determining the presence of hepatitis B present in the test sample by detecting the signal generated.